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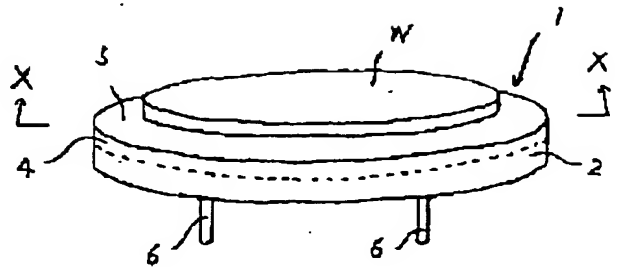
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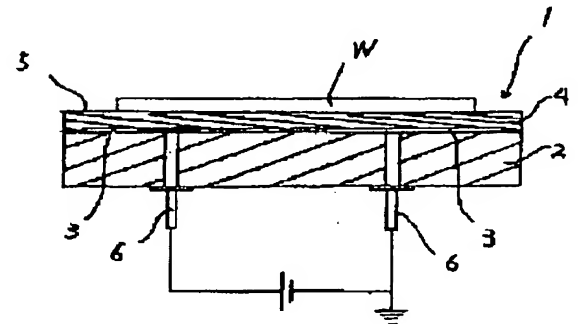
INT.CL. : H01L 21/68 C04B 35/111 H02N 13/00

TITLE : ELECTROSTATIC CHUCK

(a)



(b)



ABSTRACT : **PROBLEM TO BE SOLVED:** To provide an electrostatic chuck having superior plasma resistance and superior corrosion resistance to a halogen system gas for fixing a sample by allowing an electrostatic absorbing force by a Johnson-Rahbek force to appear in the entire temperature range of 300 to 500°C.

SOLUTION: An electrostatic absorbing electrode 3 is formed on a ceramic substrate 2, and a ceramic dielectric layer 4 is covered integrally on the ceramic substrate 2 so that the electrostatic absorbing electrode 3 can be covered, and the upper face of the ceramic dielectric layer 4 is formed as the holding face of a sample W in this electrostatic chuck 1. At least, the ceramic dielectric layer 4 is formed of an aluminum sintered body, in which an aluminum content is 99 wt.% or higher, and an aluminum mean crystal grain diameter is 1-3 μm , and porosity is 0.5% or less, and the volumetric intrinsic resistance value of the aluminum sintered body, constituting the ceramic dielectric layer 4 is set $1 \times 10^8 - 10^{11} \Omega \cdot \text{cm}$ in a temperature range ranging from 300 to 550 °C. Thus, a sample W can be absorbed and fixed by causing a Johnson-Rahbek force to appear.

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